

## ABSTRACT

[0050] The invention is directed to a method for improving the depth discrimination in optically imaging systems. It is applicable in particular in light microscopy for improving image quality when examining three-dimensionally extending objects. It is applicable in the method of structured illumination as described in WO 97/6509. For this purpose, influences due to variations in the brightness of the light source, positioning of the imaged periodic structure and bleaching of the object in fluorescence illumination are determined and taken into account in the calculation of the object structure.